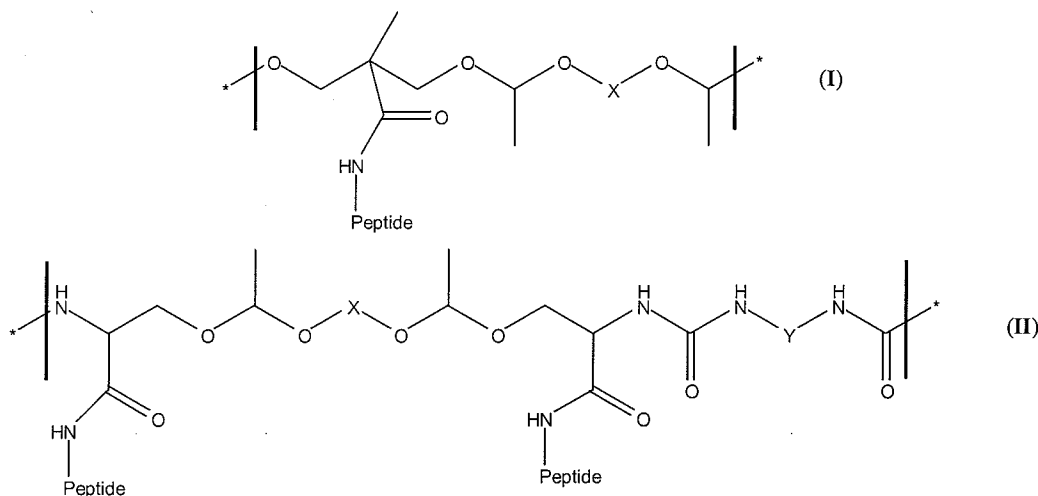


AMENDMENTS TO THE CLAIMS

1. (Currently amended) A ~~composition-complex~~ for delivering an isolated DNA to a cell, comprising: (a) the isolated DNA, and (b) a biodegradable polyacetal-peptide, wherein the biodegradable polyacetal-peptide comprises at least one recurring unit represented by a formula selected from the group consisting of (I) and (II):



wherein the peptide is selected from SEQ ID NOS: 5, 6 and 8;

wherein X is selected from the group consisting of CH_2CH_2 , $\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2$, $\text{CH}_2\text{CH}_2\text{OCH}_2\text{CH}_2$, and $\text{CH}_2\text{CH}_2\text{OCH}_2\text{CH}_2\text{OCH}_2\text{CH}_2$; and

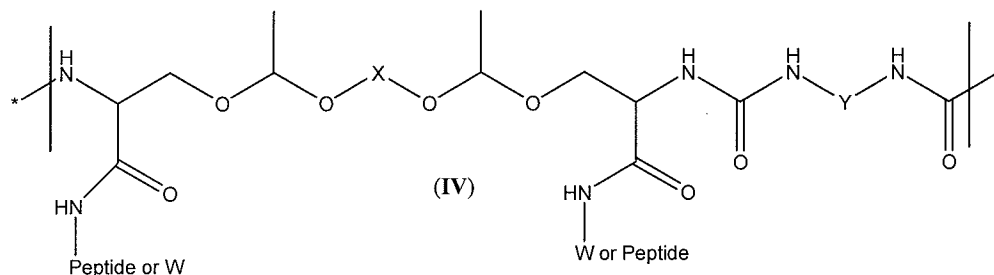
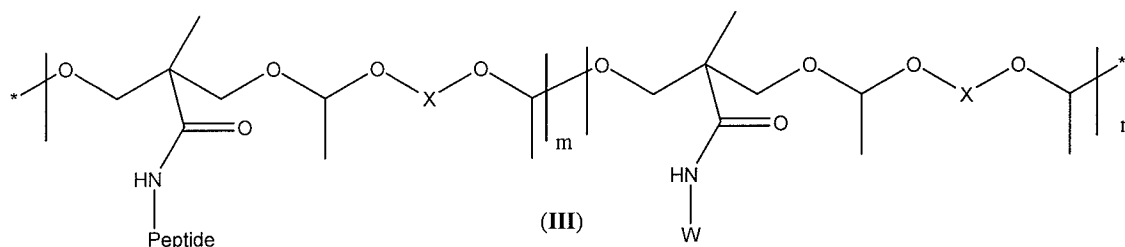
wherein Y is selected from the group consisting of linear or branched C_4H_8 , C_5H_{10} , C_6H_{12} , C_7H_{14} , C_8H_{16} , $\text{C}_{10}\text{H}_{20}$, and $\text{C}_{12}\text{H}_{24}$.

2. (Cancelled)

3. (Currently amended) The ~~composition-complex~~ of Claim 1 in which the DNA is selected from the group consisting of plasmid DNA and DNA oligomers.

Claims 4-6. (Cancelled)

7. (Currently amended) The ~~composition-complex~~ of Claim 1 in which the biodegradable polyacetal-peptide comprises at least one recurring unit represented by a formula selected from the group consisting of (III) and (IV):



wherein the peptide is selected from SEQ ID NOS: 5, 6 and 8;

wherein X is selected from the group consisting of CH_2CH_2 , $\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2$, $\text{CH}_2\text{CH}_2\text{OCH}_2\text{CH}_2$, $\text{CH}_2\text{CH}_2\text{OCH}_2\text{CH}_2\text{OCH}_2\text{CH}_2$;

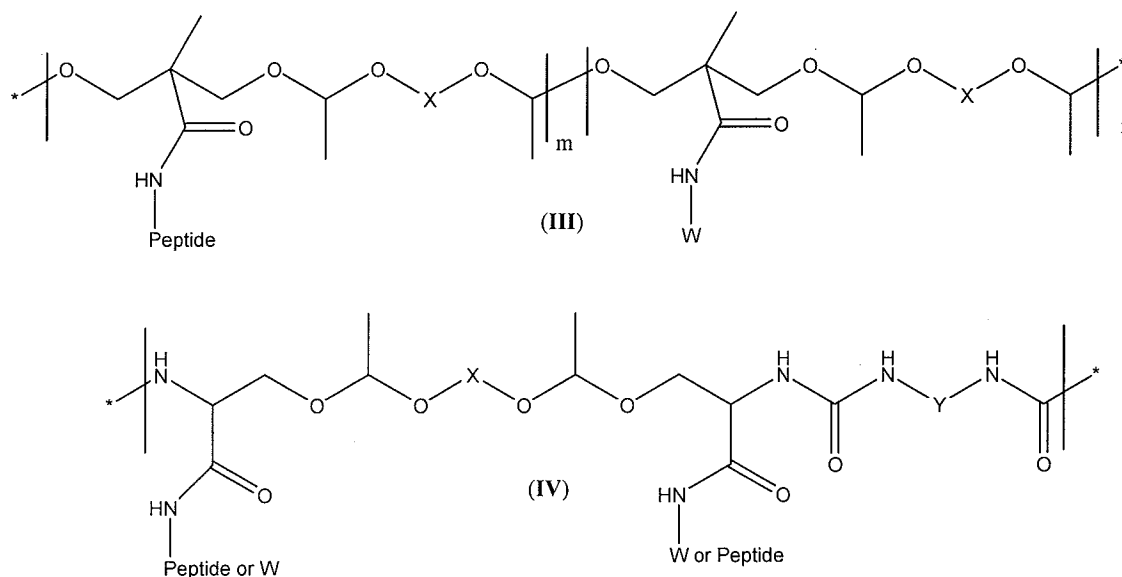
wherein Y is selected from the group consisting of linear or branched C_4H_8 , C_5H_{10} , C_6H_{12} , C_7H_{14} , C_8H_{16} , $\text{C}_{10}\text{H}_{20}$, and $\text{C}_{12}\text{H}_{24}$; and

wherein W is a fatty acid moiety or a targeting ligand selected from the group consisting of galactose, lactose, mannose, transferrin, antibody fragment, and RGD peptide; and

m and n are positive integers.

8. (Cancelled)
9. (Withdrawn) A method of making a complex for delivering a polynucleotide to a cell comprising intermixing a solution comprising the polyacetal-peptide of Claim 1 to a second solution comprising the DNA.
10. (Withdrawn) A method for transfecting a cell, comprising contacting the cell with the complex of Claim 9.
11. (Original) A polyacetal-peptide represented by formula (I) or (II).
12. (Withdrawn) A method of cell transfection comprising the steps of:
 - (a) seeding cells to be transfected onto a solid support;

- (b) mixing a DNA for transfection with the polyacetal-peptide of claim 1;
(c) contacting the DNA-polyacetal-peptide mixture with the seeded cells on the solid support; and
(d) incubating the solid support to allow transfection.
13. (Withdrawn) The method of claim 12, wherein a weight ratio of the DNA to the polyacetal-peptide is between about 1:4 and 1:50.
14. (Withdrawn) The method of claim 13, wherein the weight ratio of the DNA to the polyacetal-peptide is between about 1:16 and 1:32.
15. (Cancelled)
16. (Withdrawn) The method of claim 12, wherein the polyacetal-peptide comprises at least one recurring unit represented by a formula selected from the group consisting of (III) and (IV):



wherein the peptide is selected from SEQ ID NOS: 5, 6 and 8;
wherein X is selected from the group consisting of CH_2CH_2 , $\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2$, $\text{CH}_2\text{CH}_2\text{OCH}_2\text{CH}_2$, and $\text{CH}_2\text{CH}_2\text{OCH}_2\text{CH}_2\text{OCH}_2\text{CH}_2$;
wherein Y is selected from the group consisting of linear or branched C_4H_8 , C_5H_{10} , C_6H_{12} , C_7H_{14} , C_8H_{16} , $\text{C}_{10}\text{H}_{20}$, and $\text{C}_{12}\text{H}_{24}$;
wherein W is a fatty acid moiety or a targeting ligand selected from the group consisting of galactose, lactose, mannose, transferrin, antibody fragment, and RGD peptide;

and m and n are positive integers.

17. (Withdrawn) The method of claim **12**, wherein the solid support is selected from the group consisting of a multiwell plate, a dish, a flask, a tube, a slide and an implanted device.

Claims 18-20. (Cancelled)

21. (Withdrawn) The method of claim **12**, wherein the DNA is circular, linear or single-strand oligonucleotide.

22. (Withdrawn) The method of claim **12**, wherein the cells are prokaryotic or eukaryotic cells.

23. (Withdrawn) The method of claim **22**, wherein the eukaryotic cells are yeast, plant or animal cells.

24. (Withdrawn) The method of claim **23**, wherein the animal cells are mammalian cells.

25. (Withdrawn) The method of claim **24**, wherein the mammalian cells are selected from the group consisting of hematopoietic cells, neuronal cells, pancreatic cells, hepatic cells, chondrocytes, osteocytes, and myocytes.

26. (Withdrawn) The method of claim **25**, wherein the neuronal cells are NT-2 cells.

27. (Withdrawn) The method of claim **12**, wherein the cells are fully differentiated cells or progenitor/stem cells.